

## CLAIMS

What is claimed is:

- Sub A1
1. An apparatus for providing an input/output interface with load balancing functionality between a host and a target, comprising:
    - a first data transfer route suitable for communicatively coupling the apparatus to a host system;
    - a second data transfer route suitable for communicatively coupling the apparatus to a target;
    - a third data transfer route suitable for communicatively coupling the apparatus to the target;
    - a memory suitable for storing electronic data, the memory including a program of instructions; and
    - a controller communicatively coupled to the first data transfer route, the second data transfer route, the third data transfer route and the memory, the controller suitable for performing the program of instructions, wherein the program of instructions configures the controller to transfer data between the host and target by balancing data transferred over the second data transfer route and the third data transfer route.
  2. The apparatus as described in claim 1, wherein the host does not have dynamic multipathing filter functionality.
  3. The apparatus as described in claim 2, wherein the host, when confronted with multiple routes to a target, views the multiple routes as multiple targets.
  4. The apparatus as described in claim 1, wherein a logical identifier is utilized to access the apparatus by the host.

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5. The apparatus as described in claim 4, wherein the logical identifier is included in a logical identifier table.
  6. The apparatus as described in claim 4, wherein the logical identifier is associated with a target routing table, the target routing table including a target routing entry indicating a data transfer route between the target and the apparatus.
  7. The apparatus as described in claim 6, wherein the route includes at least one of world wide node name and world wide port name.
  8. The apparatus as described in claim 6, wherein the target routing entry includes a physical address of the target
  9. The apparatus as described in claim 1, wherein the apparatus is communicatively coupled to the target over at least one of a loop and fabric.

10. A system including an input/output interface with load balancing functionality for communicatively coupling a host and a target, comprising:

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- a host including an input/output interface, the input/output interface including
    - a first data transfer route suitable for communicatively coupling the input/output interface to the host;
    - a second data transfer route suitable for communicatively coupling the input/output interface to a target;
    - a third data transfer route suitable for communicatively coupling the input/output interface to the target;
  - a memory suitable for storing electronic data, the memory including a program of instructions; and
  - a controller communicatively coupled to the first data transfer route, the second data transfer route, the third data transfer route and the memory, the controller suitable for performing the program of instructions, wherein the program of instructions configures the controller to transfer data between the host and target utilizing a logical identifier included in a logical identifier table associated with the second data transfer route and the third data transfer route, the data transfer performed by utilizing the second data transfer route and the third data transfer route in a load balanced manner.

11. The system as described in claim 10 wherein the second data transfer route and the third data transfer route are indicated by entries in a target routing table.

12. The system as described in claim 11, wherein the target routing table includes a target routing entry indicating a data transfer route between the input/output

interface and the apparatus.

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13. The system as described in claim 15, wherein the route includes at least one of world wide node name and world wide port name.
  14. The system as described in claim 15, wherein the target routing entry includes a physical address of the target
  15. The system as described in claim 10, wherein the apparatus is communicatively coupled to the target over at least one of a loop and fabric.

16. A method for providing a load-balancing function between a host and a target in a network environment by an input/output interface, comprising:

providing a logical identifier table by an input/output interface, the logical identifier table including at least one logical identifier, the logical identifier suitable for referencing at least one physical address identifier of a target; and

managing communications between the host and the target by the input/output interface, the communications occurring over at least one of a first route and a second route of at least two routes communicatively coupling the input/output interface to the target so that the host transfers data by balancing data transferred utilizing the second route and the third route of the at least two routes.

17. The method as described in claim 19, wherein the logical identifier is associated with the physical address identifier included in a target routing table.

18. The method as described in claim 21, wherein the physical address identifier includes at least one of world wide node name and world wide port name.

19. The method as described in claim 19, wherein the input/output interface is communicatively coupled to the target over at least one of a loop and fabric.

20. The method as described in claim 19, wherein the input/output interface includes a controller, the controller suitable for managing the communications.

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21. An input/output interface suitable for providing a load-balancing function between a host and a target in a network environment, comprising:

means for providing a logical identifier table by an input/output interface, the logical identifier table including at least one logical identifier, the logical identifier suitable for referencing at least one physical address identifier of a target; and

means for managing communications between the host and the target by the input/output interface, the communications occurring over at least one of a first route and a second route of at least two routes communicatively coupling the input/output interface to the target so that the host transfers data by balancing data transferred utilizing the second route and the third route of the at least two routes.